Remarks/Arguments:

Claims 1-11 are pending and rejected in the application. Claim 1 has been amended. No new matter has been added.

On page 2, the Official Action rejects claims 1-6 and 9 under 35 U.S.C. § 103(a) as being unpatentable over Hayashi (US 6,075,829) in view of Paneth (US 4,862,107) and further in view of Applicants' Admitted Prior Art (AAPA). It is respectfully submitted, however, that the claims are patentable over the art of record for at least the reasons set forth below.

Applicants' invention, as recited by claim 1, includes features which are neither disclosed nor suggested by the art of record, namely:

> **... wherein the first reference signal divided by the frequency divider is input only to the frequency multiplier.**

Claim 1 relates to a connection between a frequency divider and a frequency multiplier. Specifically, the output of the frequency divider (the divided reference signal) is input only to the frequency multiplier. Support for this feature can be at least found on page 3 of Applicants' specification and furthermore, shown in Fig. 1. No new matter has been added.

In Fig. 1, Paneth shows a frequency divider 16 which has two outputs 46 and 48. The output 48 from frequency divider 18 is input to frequency multiplier 24 and frequency divider 20. Thus, Paneth's frequency divider 18 does not only input the divided signal to frequency multiplier 24 (it also inputs the divided signal to frequency divider 20).

In similar art, Hayashi suggests a frequency divider 35 which divides the frequency of a reference signal 36. Specifically, Hayashi's frequency divider 35 outputs a signal to a phase detector 34. Thus, Hayashi does not suggest a frequency divider which only outputs the divided frequency to a frequency multiplier.

AAPA Fig. 5 suggests a frequency multiplier, but does not suggest a frequency divider. Thus, AAPA does not suggest a frequency divider which only outputs the divided frequency to a frequency multiplier.

The combination of Paneth, Hayashi, AAPA do not suggest a frequency divider which outputs the divided signal only to a frequency multiplier. It would not be obvious to modify AAPA with Paneth, because Paneth's frequency divider 18 has two outputs and does not output the divided signal to only multiplier 24.

Applicants' claim 1 is different than the art of record because a frequency divider outputs a frequency divided reference signal only to a frequency multiplier ("*... wherein the first reference signal divided by the frequency divider is input only to the frequency multiplier.*").

As shown in Applicants' Fig. 1, frequency divider 4 divides the reference signal provided by reference signal generator 1. Frequency divider 4 outputs the divided reference signal only to frequency multiplier 5 (there is only one output path from the divider).

By frequency dividing the reference signal, the current required by frequency multiplier 5 may be reduced (see page 3, lines 20-27 of Applicants' specification). Thus, in Applicants' claim 1, the reference signal is lowered one time by the frequency divider and then raised only by the frequency multiplier. Support for this feature can be at least found on page 3 of Applicants' specification. No new matter has been added.

On page 9, the Official Action rejects claims 7-8 and 10-11 under 35 U.S.C. § 103(a) as being unpatentable over Hayashi in view of Paneth in view of AAPA and further in view of Lee (US 2001/0048715). Lee is relied upon for teaching that the base band transform circuit is formed in a bi-CMOS device. Lee, however, does not make up for the deficiencies of Hayashi, Paneth and AAPA with respect to Applicants' claim 1. Thus, claims 7-8 and 10-11 are also patentable over the art of record for at least the reasons set forth above with respect to claim 1.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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